

compositions for prevention, treatment or therapy of traumatic injuries to the nerve tissues or the spinal cord, the pharmaceutical compositions for inhibiting apoptosis or apoptosis-like cell death of oligodendrocytes, the pharmaceutical compositions for prevention, treatment or therapy of spinal cord injuries, and to the pharmaceutical compositions for prevention, treatment or therapy of demyelination.

The inventors of the present invention have found that ginsenoside Rb₁ or its metabolites are extremely effective for prevention, treatment or therapy of diseases of the nervous tissues or the spinal cord. Consequently, the present invention relates to the methods for exploring novel active compounds or components for prevention, treatment or therapy of diseases of the nervous tissues or the spinal cord by using ginsenoside Rb₁ or its metabolites as a leading compound(s).

The present invention still further relates to the use of ginsenoside Rb₁ or its metabolites as the leading compound(s) for exploring novel active compounds or components for prevention, treatment or therapy of diseases of the nervous tissues or the spinal cord, and to the use of ginsenoside Rb₁ or its metabolites as the leading compound(s) for exploring novel brain cell-protective agents or novel neuroprotective agents. The present invention further relates to the compositions for prevention, treatment or therapy of diseases of the nervous

tissues or the spinal cord as obtained by the methods or uses hereinbefore.

The present invention relates to the use of ginsenoside Rb₁, its metabolites or salt thereof for production of pharmaceutical compositions for prevention, treatment or therapy of diseases caused by injuries to the nervous tissues or to the spinal cord. The present invention further relates to the use of ginsenoside Rb₁, its metabolites or salt thereof for production of the pharmaceutical compositions for promoting vascular regeneration and/or reconstruction, the pharmaceutical compositions for prevention, treatment or therapy of the secondary degeneration of the nervous tissues, the pharmaceutical compositions for prevention, treatment or therapy of traumatic injuries to the nerve tissues or to the spinal cord, the pharmaceutical compositions for inhibiting apoptosis or apoptosis-like cell death of oligodendrocytes, the pharmaceutical compositions for prevention, treatment or therapy of spinal cord injuries, and to the pharmaceutical compositions for prevention, treatment or therapy of demyelination.

The pharmaceutical compositions of the present invention preferably contain ginsenoside Rb₁, its metabolites or salt thereof at low concentrations. The pharmaceutical compositions of the present invention is preferably in the form of parenteral

administration such as intravenous administration or mucosal administration. More particularly, the pharmaceutical compositions of the present invention are preferably in the form of parenteral administration containing ginsenoside Rb₁, its metabolites or salt thereof at low concentrations.

The present invention further relates to preparations comprising ginsenoside Rb₁, its metabolites or salt thereof, preferably at low concentrations, for parenteral administration, preferably the preparations for intravenous administration, for prevention, treatment or therapy of the diseases described hereinbefore.

The pharmaceutical compositions of the present invention are preferably used as the preparations for intravenous administration, and any administration routes, for example, external preparations for topical use in lesion, topical injections for lesion, preparations for oral administration, nasal drops, eye drops, suppositories, subcutaneous injections, intracutaneous injections, intramuscular injections, inhalations, sublingual preparations and percutaneous absorption can be selected.

The present invention relates to preparations such as the preparations for intravenous administration and the external preparations for topical use in lesion for long term therapy, prevention or treatment of brain and nerve diseases the promoters of cerebrovascular regeneration and reconstruction or to the